State of California

Memorandum

To: Ms. Marcia Liao
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700 Heinz Avenue, Suite 200
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Date: January 26, 2005

From: Beckye Stanton, Ph.D. Associate Toxicologist and
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Subject: Comments on Draft Feasibility Study for Seaplane Lagoon, Alameda Point, Alameda, California. SITE # 201209

The California Department of Fish and Game, Office of Spill Prevention and Response (DFG-OSPR) has completed its review of the subject document received November 30, 2004. Battelle prepared the document for the Navy. The following comments are provided as part of our role as a natural resource trustee for the State of California's fish and wildlife and their habitats.

Background

Alameda Point is a former U.S. Navy installation located at the western end of Alameda Island which is on the east side of San Francisco Bay. Alameda Point is at the western end of the City of Alameda in Alameda County. It is rectangular, with dimensions of 2 miles long from east to west and 1 mile wide from north to south, and occupies 1,734 acres of land. The installation, formerly known as Naval Air Station (NAS) Alameda, served as an aircraft maintenance, repair, and refit center and as a base of operations for Naval surface craft from before World War II until its closure in April 1997 under the Defense Base Realignment and Closure Act of 1990. NAS Alameda was renamed Alameda Point in a reorientation of the facility toward civilian use.

Seaplane Lagoon (SPL) is located on the southeastern corner of Alameda Point. From the 1940s to 1975, SPL was a point of discharge for some of the naval station's storm-sewer outfalls. The lagoon received approximately 300 million gallons of wastewater from industrial and storm-sewer outfalls. Industrial wastewater generated at the former NAS from the 1940s to mid-1970 was discharged directly to the storm drains, which subsequently discharged to the lagoon and other offshore areas. This wastewater was reported to contain heavy metals, solvents, paints, detergents, acids, caustics, mercury, radium, and oil and grease. The lagoon also received concentrated hazardous materials from spills that subsequently were washed into the industrial waste or storm-sewer collection system. In 1975, industrial discharge to the lagoon stopped. The majority of the discharge pipelines were cleaned during the 1995 to 1997 removal action.

General Comments

1. As identified previously, the operable unit (OU) 2B is a potential source of contamination to SPL. We recommended that the Navy remove contaminants from any up-gradient sources (i.e., storm drains and groundwater) or prevent a pathway between these sites and SPL prior to implementing any of the alternatives. To our knowledge, the potential connections of contaminated groundwater to surface water and sediment in SPL, and the possibility of eroded contaminated soil being transported through the storm drains that discharge into SPL still exist. OU-2B soils contaminated with lead, arsenic, copper, PAHs, and other chemicals could be destabilized because of surface runoff or construction activity.

2. Bird species of concern at SPL include the California least tern (*Sterna antillarum browni*), for which SPL is a documented foraging area, and the California brown pelican (*Pelecanus occidentalis californicus*). Both birds are state and federally-listed endangered species. Other birds which may be affected by storm water runoff from the four sites include various species of diving ducks. Various fish species in SPL or nearby San Francisco Bay waters may also be affected.

3. Further data analysis and confirmation sampling is needed to ensure that the exposure to other COCs is sufficiently reduced by the proposed remediation for cadmium, total DDTs, and total PCBs.

Specific Comments

1. Page 40. DFG-OSPR did not receive an applicable or relevant and appropriate requirement (ARARs) request previously. The document does not include all of the DFG ARARs, and the discussion of the various alternatives does not contain analysis of whether or not the alternative is consistent with these ARARs. Please provide this analysis in the Final FS. The enclosed table includes ARARs for this site.

2. Page 51. The number for the PCB value cited in the last paragraph appears to be missing.

3. Page 53. The use of laboratory *Macoma* data, rather than the available forage fish data, is inconsistent with the dietary preferences of the least tern as a piscivorous bird and the likely exposure pathway. DFG-OSPR recommends that the PRGs be calculated using the forage fish tissue concentrations.

4. Page 55. Please evaluate residual concentrations of other COCs given the proposed remediation area to validate the assumption of their co-occurrence with cadmium, total DDTs, and PCBs. In addition, confirmation samples should be analyzed for all COCs to further ensure all COCs are sufficiently remediated.

5. Page 55. Please clarify whether the area-averaged calculations were done only for the shaded areas on Figure 3-1.

6. Pages 55, 191, and 192. The units for cadmium should be in mg/kg, not µg/kg.

7. Pages 55 and 191. The area-averaging calculations would be more accurate if the sample concentrations were used for the depth interval from which they were taken. The current proposal uses the average concentration across multiple sample depths and then multiplies by 2 feet. This process ignores already available data that could be incorporated into the calculations fairly easily to determine total contaminant mass in the upper two feet for each location.

8. Pages 55 and 191. Please explain what program is used to contour the chemical concentrations.

9. Pages 56 and 57. For the diagrams illustrating the proposed footprints, please explain how footprint was set relative to the distance between two sample locations. For example, the footprint could extend halfway between a sample location with a PRG exceedance and a location where PRGs were not exceeded.

10. Page 140, Section 5.3.1: The No Action Alternative includes no remediation and would result in ongoing harm to fish and wildlife resources. Therefore, this alternative is not acceptable to DFG-OSPR.

11. Page 141, Section 5.3.2: The Isolation Capping/Monitoring/Institutional Controls alternative would result in "wetland creation" as a method of containing contamination. The placement of fill material into SPL, even as a cover for contamination, is generally unacceptable to DFG-OSPR. The document should clearly indicate what type of habitat will be created, and what fish and wildlife resources will be supported. In addition, the type of habitat being lost, and the fish and wildlife resources which will be harmed should be outlined. Both interim and permanent lost use should be described.

12. Page 157, Section 5.3.3: The Dredging/Monitoring/Dewatering/Upland Confinement alternative would remove contaminated sediments from the SPL, and provide for off-site disposal. This alternative appears to meet our ARARS. Dredging to 4 foot depth at locations where contamination above action goals extends to the deepest depth sampled may expose a new sediment surface where contamination still exceeds action goals. Further sampling either prior to

or following dredging would be needed to ensure that all sediment with concentrations above the action goals is removed.

13. Pages 158, 164. Please provide a rationale justifying dredging to a 4 foot depth at locations where the deepest depth sampled was still above action goals; that is, where the depth of contamination is still uncharacterized. The deepest sample from locations S03 and S04 was taken at 3.2 feet and concentrations still exceeded the action goals at that depth. At location BERC13, concentrations in the 2 to 5 foot composite sample also exceeded the action goals.

14. Page 170, Section 5.3.4: The Focused Dredging/Monitoring/Dewatering/Upland Confinement alternative appears to meet our ARARS as well with the exception of our concerns detailed in Specific Comment 12 above.

15. Appendix B. Please include additional state ARARs from the attached table. The document does not include all of the DFG ARARs, and the discussion of the various alternatives does not contain analysis of whether or not the alternative is consistent with these ARARs. Please provide this analysis in the Final FS. The enclosed table includes ARARs for this site.

Conclusions

After reviewing the risk assessment results, DFG-OSPR concurs with Alternative 5 and Alternative 6 of the report. The Isolation Capping alternative (Alternative 3) requires the placement of fill material into SPL, an activity that is generally unacceptable to DFG-OSPR, and may not fully prevent exposure of fish and wildlife. In addition, DFG-OSPR is concerned that dredging to 4 foot depth at locations where contamination above action goals extends to the deepest depth sampled may expose a new sediment surface where contamination still exceeds action goals. Further sampling either prior to or following dredging would be needed to ensure that all sediment with concentrations above the action goals is removed. Further discussions regarding dredging and/or placing fill in San Francisco Bay must be done in consultation with Ms. Becky Ota of our Menlo Park Office (650) 631-6789. Wetland creation and restoration discussions must be coordinated with Mr. Timothy Stevens of our Yountville Office (707)944-5523.

DFG-OSPR appreciates the opportunity to review this document. If you have any questions regarding this memo or require further details, please contact Charlie Huang at (916) 324-9805 and by e-mail at chuang@ospr.dfg.ca.gov.

Attachment: ARAR Table

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File: OSPR-RF, Chron, BRAC-Alameda, Huang, Stanton
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CALIFORNIA DEPARTMENT OF FISH AND GAME
LOCATION AND ACTION SPECIFIC ARARs AND TBCs
FOR SEAPLANE LAGOON FEASIBILITY STUDY, ALAMEDA POINT

LOCATION	STANDARD	SPECIFIC CITATION	ARAR/TBC EXPLANATION
Aquatic habitat/species	Action must be taken if toxic materials are placed where they can enter waters of the State. There can be no release that would have a deleterious effect on species or habitat.	Fish and Game Code section 5650 (a), (b) & (f)	This code section prohibits depositing or placing where it can pass into waters of the state any petroleum products (Section 5650(a)(1)), factory refuse (section 5650(a)(4)), sawdust, shavings, slabs or edgings (section 5650(a)(3)), and any substance deleterious to fish, plant life or bird life (section 5650(a)(6)). These are substantive, promulgated environmental protection requirements. These requirements impose strict criminal liability on violators. (*People v. Chevron Chemical Company (1983) 143 Cal. App. 3d 50).* This imposition of strict criminal liability imposes a standard that is more stringent than federal law. The extent to which each subdivision of section 5650 is relevant and appropriate depends on the site characterization and the potential for contaminants to be deposited near or within waters of the state.
Wildlife Species	Action must be taken to prohibit the taking of birds and mammals, including the taking by poison	Fish and Game Code section 3005 (Stats. 1957, c. 456, p. 1353 section 3005)	This code section prohibits the taking of birds and mammals, including taking by poison. "Take" is defined by Fish and Game Code section 86 to include killing. "Poison" is not defined in the code. Although there is no state authority on this point, federal law recognizes that poison, such as Strychnine, may affect incidental taking. (*Defenders of Wildlife v. Administrator, Environmental Protection Agency (1989) 882. F. 2d. 1295).* This code section imposes a substantive, promulgated environmental protection requirement.
Endangered Species	Action must be taken to conserve endangered species, there can be no releases and/or actions that would have a	Fish and Game Code section 2080 (Added by Stats. 1984, c.	This section prohibits the take, possession, purchase or sell within the state, any species (including rare native plant species), or any product thereof, that the commission determines to be an endangered or threatened species, or the attempt of any of these acts. This section is applicable and relevant to the extent that there are endangered or threatened species in the area which have the

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LOCATION	STANDARD	SPECIFIC CITATION	ARAR/TBC EXPLANATION
	deleterious effect on species or habitat.	1240, section 2).	potential of being affected if actions are not taken to conserve the species. This section prohibits releases and/or actions that would have a deleterious effect on species or their habitat. This section and applicable Title 14 regulations should be considered as ARARs. *California Code of Regulations Title 14 sections 670.2* provides a listing the plants of California declared to be Endangered, Threatened or Rare. *California Code of Regulations Title 14 section 670.5* provides a listing of Animals of California declared to be endangered or threatened. *California Code of Regulations Title 14 section 783 et. seq.,* provides the implementation regulations for the California Endangered Species Act.
Fully protected bird species/habitat	Action must be taken to prevent the taking of fully protected birds	Fish and Game Code section 3511 (Added by Stats.1970, c. 1036, p. 1848 section 4)	This section provides that it is unlawful to take or possess any of the following fully protected birds: (a). American peregrine falcon **(b). Brown Pelican** (c). California black rail (d). California clapper rail (e). California condor **(f). California least tern** (g). Golden eagle (h). Greater sandhill crane (i). Light-footed clapper rail (j). Southern bald eagle

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LOCATION	STANDARD	SPECIFIC CITATION	ARAR/TBC EXPLANATION
			(k). Trumpeter swan (l). White-tailed kite (m). Yuma clapper rail This should be considered Applicable and Relevant to the extent that such fully protected birds or their habitat are detected on or near the site. The Brown Pelican and California least tern are known to occur on or near this site.
Wetlands	Actions must be taken to assure that there is "no net loss" of wetlands acreage or habitat value. Action must be taken to preserve, protect, restore and enhance California's wetland acreage and habitat values.	Fish and Game Commission Wetlands Policy (adopted 1987) included in Fish and Game Code Addenda	This policy seeks to provide for the protection, preservation, restoration, enhancement and expansion of wetland habitat in California. Further, it opposes any development or conversion of wetland that would result in a reduction of wetland acreage or habitat value. It adopts the USFWS definition of a wetland which utilizes hydric soils, saturation or inundation, and vegetable criteria, and requires the presence of at least one of these criteria (rather than all three) in order to classify an area as a wetland. This policy is not a regulatory program and should be included as a TBC.
Fully Protected Mammals	Actions must be taken to assure that no fully protected mammals are taken or possessed at any time.	Fish and Game Code section 4700 (Added by Stats. 1970, c.	This section prohibits the take or possession of any of the fully protected mammals or their parts. The following are fully protected mammals: (a) Morro Bay kangaroo rat (b) Bighorn sheep except Nelson bighorn sheep (c) Northern elephant seal

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LOCATION	STANDARD	SPECIFIC CITATION	ARAR/TBC EXPLANATION
		1036, p. 1848 section 6)	(d) Guadalupe fur seal (e) Ring-tailed cat (f) Pacific right whale (g) Salt-marsh harvest mouse (h) Southern sea otter (i) Wolverine This section is applicable, relevant, and appropriate to the extent that such mammals and/or their habitat are located on or near the site.
Fully Protected Reptiles and Amphibians	Actions must be taken to prevent the take or possession of any fully protected reptile or amphibian.	Fish and Game Code section 5050 (Added by Stats. 1970, c. 1036, p. 1849, section 7)	This section prohibits the take or possession of fully protected reptiles and amphibians or parts thereof. The following are fully protected reptiles and amphibians: (1) Blunt-nosed leopard lizard (2) San Francisco garter snake (3) Santa Cruz long-toed salamander (4) Limestone salamander (5) Black toad This section is applicable, relevant and appropriate to the extent that these amphibians or reptiles and/or their habitat are located on or near the site.
Birds	Action must be taken to avoid the take or destruction of the nest	Fish and Game Code section 3503	This section prohibits the take, possession, or needless destruction of the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.

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LOCATION	STANDARD	SPECIFIC CITATION	ARAR/TBC EXPLANATION
	or eggs of any bird		
Birds of Prey	Action must be taken to prevent the take, possession, or destruction of any birds-of prey or their eggs	Fish and Game Code section 3503.5 (Added by Stats. 1985, c. 1334, section 6)	This section prohibits the take, possession, or destruction of any birds in the orders of Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. This section will be applicable and relevant to the extent that such species or their eggs are located on or near the site.
Nongame birds	Actions must be taken to prevent the take of nongame birds.	Fish and Game Code section 3800 (Added by Stats. 1971, c. 1470, p. 2906, section 13)	This section prohibits the take of nongame birds, except in accordance with regulations of the commission, or when related to mining operations with a mitigation plan approved by the department. This section further provides requirements concerning mitigation plans related to mining. This section is applicable and relevant to the extent that nongame birds or their eggs are located on or near the site and such species have not been included in the fish and wildlife conservation plan filed pursuant to the Federal Fish and Wildlife Conservation Act. Species included in the plan will be protected at the federal standard making this section an ARAR to the extent that it is more stringent than the federal standard of protection.
Fur-bearing mammals	Provides manners under which fur-bearing mammals may be taken	Fish and Game Code section 4000, et. Seq. (Stats.	This section provides that a fur-bearing mammal may be taken only with a trap, a firearm, bow and arrow, poison under a proper permit, or with the use of dogs.

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LOCATION	STANDARD	SPECIFIC CITATION	ARAR/TBC EXPLANATION
		1957, c. 456, p. 1380, section 4000)	
Nongame mammals	Action must be taken to avoid the take or possession of nongame mammals	Fish and Game Code section 4150 (Added by Stats. 1971, c. 1470, p. 2907, section 21)	Nongame mammals are those occurring naturally in California which are not game mammals, fully protected mammals, or fur-bearing mammals. These mammals, or their parts, may not be taken or possessed except as provided in this code or in accordance with regulations adopted by the commission.
Nongame Animals	Action must be taken to avoid the take of nongame mammals except as provided in applicable regulations	Title 14 California Code of Regulations (hereinafter referred as C.C.R.) section 472 (effective 07/01/74)	This Regulation provides that nongame birds and mammals may not be taken except as provided in subsections (a) through (d) below and in Sections 478 and 485. a). The following nongame birds and mammals may be taken except as provided in Chapter 6: English Sparrow, starling, coyote, weasels, skunks, opossum, moles and rodents (excludes tree and flying squirrels, and those listed as furbearers, endangered or threatened species); b). Fallow, sambar, sika, and axis deer may be taken concurrently with the general deer season. c). Aoudad, mouflon,tahr, and feral goats may be taken all year. d). American crows may be taken only under provisions of section 485 and by landowners or tenants, or person authorized by landowners or tenants, when American crows are committing or about to commit depredations upon ornamental shade trees, agricultural crops, livestock, or wildlife, or when

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			concentrated in such numbers and manner as to constitute a health hazard or other nuisance. If required by Federal regulations, landowners or tenants shall obtain a Federal migratory bird depredation permit before taking any American crows or authorizing any other person to take them.
White Shark	Action must be taken to avoid the take of any white shark	Fish and Game Code section5517 (Added by Stats. 1993, c. 1174 (A.B. 522), section 2)	It is unlawful to take any white shark (Carcharodon carcharias), except under permit issued pursuant to section 1002 for scientific or educational purposes.
Tidal Invertebrates	Action must be taken to avoid the take or possession of mollusks, crustaceans, or other invertebrates	Fish and Game Code section 8500(Added by Stats. 1972, c. 1248, p. 2436. Section 2, eff. Dec. 13, 1972)	It is unlawful to possess or take, unless otherwise expressly permitted in this chapter, mollusks, crustaceans, or other invertebrates, unless a valid tidal invertebrate permit has been issued. The taking, possessing, or landing of such invertebrates pursuant to this section shall be subject to regulations adopted by the commission.

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LOCATION	STANDARD	SPECIFIC CITATION	ARAR/TBC EXPLANATION
White Shark	Action must be taken to prevent the take of any white shark.	Title 14 C.C.R. section 28.06 (effective 03/07/94)	Regulation provides that white shark may not be taken, except under permit issued by the Department pursuant to section 1002 of the Fish and Game Code for scientific or educational purposes.